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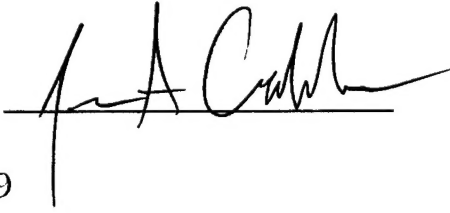
Retaliation To A Chemical Attack In A Major Regional Conflict:
Courses Of Action And Consequences

by

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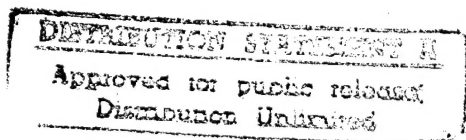
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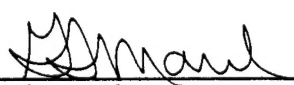
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Signature: 

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15. Abstract: How should the Operational Commander address retaliation to chemical warfare in his deliberate planning process? Joint Doctrine and the Gulf War appear to indicate that nuclear weapons form the basis for an appropriate retaliation course of action. However, Nuclear Posture statements, policy discussions, and military engagement post facto revelations tend to minimize the employment probability of nuclear weapons. As this negates their deterrent value, nuclear weapons do not present viable courses of action around which an executable plan can be built. On the other hand, conventional courses of action do. Through analysis of chemical weapons, current policy and doctrine, nuclear employment probability, and regional perspectives, conventional courses of action surface as the politically and militarily supportable basis for planning. In addition to being a credible deterrent, employment in a retaliatory mode is not likely to ignite the global political maelstrom incidental to instigating the potential for nuclear war.			
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INTRODUCTION

The theater CINC or JTF commander must consult several sources for strategic guidance in the development of Courses Of Action (COA) pursuant to deliberate planning. In addition to strategic doctrine, historical data offers significant information which can be applied to contemporary planning problems. Additionally, theories of warfare, applied to doctrine, present a stepping off point for the development of deliberate plans.

My focus is on the retaliation stage of the theory of Weapons of Mass Destruction (WMD) as it applies to Chemical Warfare (CW) from the Operational Commander's (OC)'s perspective. Historical precedence, doctrinal ambiguities, post facto revelations, and theoretical weaknesses serve as significant obstacles to the Operational Commander (OC) in the process of developing viable retaliation COA's. Specifically, if we were to use Desert Storm CW deterrence as the template for future CW deterrence, without looking at all the historical data, the OC might feel comfortable with, and justified in, seeking a nuclear deterrence to CW in future conflicts. However, the facts presented provide critical lessons for the OC. My intent is to propose arguments which support an operational necessity to develop CW retaliatory COA's which do not involve nuclear weapons.

In order to put the proposed arguments in context, an historical

perspective is required. The import of CW on operational art and the efficacy of its employment has substantial bearing on the way a commander should view this weapon and shape his retaliatory COA.

Next I will touch on doctrine and its impact on COA development. As much as doctrine provides the foundation upon which COA's are built, ambiguities in doctrine, can generate untenable COA solutions.

With this background information, I will present the strategic theory pertaining to WMD, in order to support the conventional retaliation arguments. Central to the theory are the Nuclear Non-proliferation Treaty (NPT), Chemical Warfare Convention (CWC), and Biological Warfare Convention (BWC). (See appendix A for a brief overview of these treaties and conventions). These treaties and conventions are critical to establishing a credible retaliation policy upon which the OC can base his COA. I will touch on the potential to sabotage these treaties, which would significantly complicate the OC's COA development.

Finally, regional perspectives with historical analysis offer a characteristic problem for the OC to grapple with.

HISTORICAL PERSPECTIVE

PRE WWI

Prior to WWI, numerous attempts had been made to limit and/or ban chemicals as a weapon of war. The Strasburg Agreement of 1675

between France and Germany forbade the use of poisoned bullets. The 1874 "International Declaration concerning the Laws and Customs of War", forbade the use of poisons and poisoned weapons, while the Hague Convention of 1899 prohibited the use of poisons and poisoned arms.¹ Although irritating gases had always been a part of warfare, by 1899, technological advancements permitted the development of noxious gases capable of causing an agonizing death to the unprotected. As a result, a declaration was appended to the convention, which promised the abstention from the use of projectiles to dispense these deadly gases. The declaration was binding only on contracting powers, given a war between two or more of them. It would cease to be binding at the time one of the powers became allied with a non-contracting power.² The issue of retaliation was not addressed as it was assumed contracting powers would abstain from use. This created a loophole which permitted retaliation, given "illegal" first use by one of the powers. The consequence of this loophole is that perceived use by one belligerent can prompt actual use by the opposing belligerent, resulting in an ill-conceived escalation with no bounds of convention. The increasingly toxic gas exchanges between France and Germany during WWI, both ratifiers of the 1899 Convention and signatories to the gas declaration, is representative of this type of escalation.³

POST WWI

Following WWI, an evaluation of CW determined that technology favored defense. The evaluation also revealed that CW was of no strategic value, and its non-discriminatory, incapacitating nature had limited tactical application.. As a tactical tool, it added to the friction of war on both sides and favored neither.

Theoretically, this should have shut the door on the use of CW, both strategically and tactically, in future wars. In fact, an analysis of major conflicts since, would tend to support this view. But, U.S. development and stockpiling of toxins continued well into the 1970's despite the Gas Protocol established in the 1925 Geneva Convention.⁴ This was primarily due to the precedent set by France and Germany in WWI which, as a result of the before mentioned loophole, created the need for a retaliation capability. In concurrence with the concept of "proportionality of response" our retaliation policy was "response-in-kind" from 1925 until 1993.

Interestingly, it is widely argued that the "response-in-kind" policy, coupled with President Roosevelt's "no-first-use" policy, was the primary reason why CW was not employed during WWII.⁵ The abstention from CW by all parties is a classic example of effective deterrence based on a clearly defined retaliation policy. The promised response was not worth the action. In fact post war records from all

belligerents validate the deterrence theory.

COLD WAR

Beginning in 1967 and continuing through 1975, our CW capabilities deteriorated significantly for a number of identifiable reasons.⁶ The posture review of 1975 revealed that our "response-in-kind" policy was not viable due to an inconsequential chemical weapon stockpile and the discovery of a completely inadequate defensive infrastructure.⁷ As a result, U.S. defensive capabilities began a major revitalization. By 1984 combatants had a credible defense against any chemical weapons in any known arsenal.⁸ On the other hand, our development and stockpiling of chemical weapons was never regenerated in earnest, leaving us with a hollow deterrence. The root cause of this disparity is the result of our strategic policy through the end of the Cold War. Our entire force structure was built around deterring Soviet expansionism in Europe. The nuclear "first-strike" policy was to deter Soviet aggression of any kind. Understandably, the CW response, from our perspective, became a moot point when nuclear weapons were promised up front.

In the 1980's the deterrence umbrella expanded from the European theater to the East Asian and Middle East theaters to thwart Soviet expansion into states friendly with the west.⁹ This policy creep

allowed policy makers to continue to avoid the CW issue. It was assumed that any aggression in these theaters would be openly backed by the Soviet Union, obligating counter aggression based on the Soviet model. The response to a chemical attack by an aggressor state not supported by, or, allied with the Soviet Union was not adequately addressed, which left us flat footed on policy when Iraq invaded Kuwait on 2 August 1990. The immediacy of the problem, given our inevitable involvement in the area, necessitated a strong policy statement which avoided ambiguity. General Powell was able to convince President Bush that our strongest deterrent to the immediate threat was to promise Saddam Hussein a retaliation with unconventional weapons if they used chemicals on us.¹⁰ Given the paucity of our chemical weapon stockpile, CW lacked credibility as a deterrent to first-use. By process of elimination, the very clear threat to Saddam, was nuclear retaliation.

GULF WAR

Historically, we know Saddam did not use chemical weapons but, we can not categorically tie that fact to the nuclear retaliation threat. Actually, there is no clear cut reason why Saddam refrained from CW. General Schwartzkopf stated that some felt it was out of fear of nuclear retaliation while others felt it was because we destroyed his capability to employ his weapons.¹¹ Still others feel that it was a fear of a

massive conventional response.¹² This fear may have included thoughts of expanded coalition objectives, which might have included taking Baghdad, and forcing Saddam from power prior to cessation of hostilities. Yet, unless we can glean a genuine lesson which is applicable to future conflicts, we are still at square one from the deterrence perspective. We know only that Saddam did not use chemical weapons, not that he was deterred from it. Arguably, since there is not a deterrence lesson here, we should not try to invent one to form an overarching template with which we map out our future conflicts. The important lesson, for all reviewers, is summed up in a post war analysis which stated "the tempo of the 'Storm' would have been hindered by the need to wear protective clothing, [if chemicals had been used] but the overall outcome would have been unaffected".¹³ This finding reaffirms the revelations concerning CW published after WWI.

POLICY AND DOCTRINE

Today, post Cold War, we face Third World threats characterized as "Rogue" countries, driving the "Rogue Doctrine", which was developed as a result of Les Aspin's 1993 "Bottom Up Review".¹⁴ The underlying current of the review was the recognition that these "Rogue" adversaries might possess WMD, and provided for a U.S. force structure

better prepared to destroy WMD inventories before they could be used and to defend against them should the destruction efforts fail.¹⁵ Until these "Rogue" countries ratify the 1993 CWC, permitting a quantitative assessment of their arsenals, the U.S. must assume that a chemical threat exists. This necessitates a credible deterrence. Our current CW deterrence against these weapons is invalid. It is ambiguous, lacks credibility, and may actually promote an event requiring retaliation, rather than preventing one. The policy ambiguities, which ultimately affect doctrine and COA development, result from conflicting information transmitted in our National Security Strategy (NSS), National Military Strategy (NMS), Doctrine for Joint Nuclear Operations and open Congressional hearings.

The NSS quotes the Pentagon's Nuclear Posture Review to state the purpose of our nuclear forces.¹⁶ Conspicuously absent from the force rationalization is any mention of non-nuclear WMD deterrence. In fact, the former Deputy Secretary of Defense, the Honorable Mr. John Deutch, stated "we need nuclear weapons to deter other nations that possess nuclear weapons from their use against us or our allies." He prefaced this comment with the statement that "there is not a threat in the world today or a vital interest that can not be met and or protected by conventional weapons."¹⁷ He later modified his comments to indicate

we expect nuclear weapons are a deterrent for Rogue country leaders if they were considering a ballistic missile delivery of chemical weapons to a U.S. city.¹⁸ Threats to U.S cities are significantly beyond the context of use in a major regional conflict and invalidates nuclear weapons as a CW deterrence.

Our NMS on the other hand, states our counter to WMD is our “capability to dominate any escalation of conflict should WMD be used against us ... while making preparations to operate effectively in the environments marked by biological, chemical or radio active contamination”.¹⁹ The domination of any escalation can easily be interpreted as an accelerated conventional response with expanded objectives. It appears that within our military strategy we have embraced the lessons of past wars. From an operational standpoint, the lesson for the OC is chemical weapons are not a single point of failure for combat operations. They will add to the friction of war but, defensive capabilities exist which permit warfighting in the dirty environment.

Our Doctrine for Joint Nuclear Operations lists the fundamental purpose of our Nuclear Force “is to deter the use of WMD, particularly nuclear weapons, and to serve as a hedge against the emergence of an overwhelming conventional threat.”²⁰ This very clearly assigns the

deterrence of CW to nuclear weapons and might very well lead the OC to request a nuclear COA in this respect. Support for this concern rises from the 1991 "Joint Strategic Targeting Board" findings.²¹ In light of the boards tasking for nuclear weapons, there are many who argue that resourceful Third World countries will not only obtain chemical and biological weapons, but also nuclear weapons, to hedge their bets against the potential for U.S. employment. This reasoning is not farfetched. As in WWI, with the French and German use/counter-use, even a perception of employment against the U.S. could lead to baseless nuclear escalation. If one extrapolates this one step further, the potential for nuclear escalation presents a perennial nuclear threat to any state remotely capable of being assessed with chemical weapons. (We will see later that this is just about any state with a chemical industry.) Consequently, unless a state falls under the nuclear umbrella of a larger state, they will seek a nuclear deterrence to the nuclear threat. One could easily expect a significant emphasis on acquisition of nuclear weapons by these states through clandestine means. This is anti-non-proliferation in its base form. It will significantly complicate the OC's deliberate planning process and necessitates a requirement for the OC to petition for policy that supports the NPT, vice acquiescing to policy which sabotages it.

In open Congressional hearings, Representative Jon Kyl, argues

“nuclear weapons serve to do more than just deter nuclear aggression ... and, a highly declaratory policy [stating] ‘nuclear weapons are for counter proliferation and counter nuclear use only’, would be detrimental to deterring chemical and biological toxin use by aggressor belligerents.” He goes on to state that, “although the chance of the U.S. using nuclear weapons is remote, a policy of last resort is appropriate. Our declaratory policy should be deliberately ambiguous”.²² A “policy of last resort” and “nuclear deterrence to CW” are two completely different concepts. Beyond this, stating that “use of nuclear weapons is remote” seriously impacts any thoughts an OC might have toward promoting nuclear weapons as a deterrent, and is contrary to our Joint Doctrine. We can not possibly project a formidable and credible deterrence based on incomprehensible rhetoric. Finally, being deliberately ambiguous does absolutely nothing to enhance non-proliferation. In fact, veiled policies which suggest nuclear threats will only instigate fractal cold wars. For the OC, this can mean the difference between planning a conventional campaign against a possible chemical threat or defaulting to nuclear weapons as step one.

THEORY OF WMD

The OC is obligated to formulate a retaliation plan because the warfare theory pertaining to WMD is just that, a theory. It is subject to failure at each of its four stages which are: 1) Non-proliferation, 2)

Deterrence, 3) Defense and 4) Retaliation. The consequential interdependence of one upon the other necessitates a brief discussion of each to get to the heart of retaliation.

NON-PROLIFERATION

A 100% effective non-proliferation program with a failsafe method of verifying the absence of chemical weapons in threat arsenals would create a utopian warfare environment stockpiled with conventional weapons only. However, CW non-proliferation has little application to strategic planning concerns which shape future battle fields in a major regional conflict (MRC). Generally speaking, it has global application with respect to intra-theater delivery vehicles only. To seek treaties which prevent the transfer of ballistic missile technology to non-technical countries, minimizing the high-tech delivery threat to our cities is a realistic goal. It is however, unrealistic to attempt to prevent the proliferation of chemical weapon agents. Indigenous production of these agents virtually invalidates a non-proliferation concept, as diversions of the small quantities of the feed stock needed to make chemical agents is essentially undetectable during routine peacetime production.²³ As a result, we have to assume Third World threats have the industrial capability to create and stockpile tactical chemical weapons. Consequently, the OC must build CW into strategic planning.²⁴ The WMD threat will be out there, so effective

deterrence and defense is essential.

DETERRENCE/DEFENSE

Deterrence (the use or threatened use of force) is critical, in so far as successful application preempts retaliation and provides a foundation from which a force structure is developed and policy is derived. Since deterrence resides in policy, deterrence is the crux of the problem. Effective deterrence "forces the enemy or potential aggressor to perceive at least one of the following conditions:

- a. There is serious doubt his attack can succeed.
- b. The costs of even a successful attack would be greater than the value of his "victory".
- c. There is significant threat to other valued interests".²⁵

Basic to all three is credibility. The potential aggressor has to believe you will carry out the deterrent threat and, the deterrent threat has to be something the aggressor will operationally plan to avoid. Knowing your enemy, then, is essential to developing an effective deterrent. By proffering a credible threat to an element of critical value, the enemy will theoretically avoid stimulating a deterrence based response. Arguably, without actually defining courses of action, the most effective deterrence to CW is the basis of the Powell policy.³² An inextricable part of this policy is an unaffected warfighting capability in a dirty environment or, more precisely, effective defense. This is basically a

deterrent of ineffectuality. Conceptually, it causes the enemy to envision his use of a weapon would not only fail but would obviate consequences which would be untenable. To be credible, a demonstrated capability to fight and win in a dirty environment is essential. The preemptive task which befalls the OC then, is overt capability demonstrations during peacetime. This would serve two purposes. It would remove capability questions from the aggressor. And, if deterrence should fail, the practice would permit swift, successful retaliation, which is essential to validate the credibility of the deterrence, real-time. Through demonstrated resolve to execute the threatened response, a precedent exists to deter future credibility tests.

RETALIATION

In the context of unilateral or multilateral action, the retaliation policy should be transparent. My initial argument was that, nuclear retaliation to a CW attack during an MRC in either the Middle East (Iraq) or the Far East (North Korea) would be militarily and politically unsound. The alternative is the portrayal of overwhelming U.S. conventional capabilities. This would naturally remove the nuclear threat with its resident nuclear, chemical and biological anti-non-proliferation side effects. Applying this mind set to regional perspectives of Iraq and North Korea, two of the "Rogue" states discussed earlier, the utility of nuclear weapons in the CW retaliation

context becomes apparent.

REGIONAL PERSPECTIVES

IRAQ

Post Gulf War revelations provide insight as to the probable applicability of future nuclear deterrence to an Iraq style state. Lessons learned suggest there are instances where "nuclear weapons would have eradicated critical Iraqi targets expeditiously, resulting in fewer coalition and Iraqi deaths compared to the cost associated with pursuing a conventional victory."²⁷ However, it appears that nuclear use in this war was never seriously considered.²⁸ This is compelling information. President Bush threatened Saddam with a COA which was not considered to be executable for political reasons. Post facto revelations like this seriously degrade the credibility of like deterrence postures in the future. If an OC were to ignore this information during planning for future conflicts, blind adherence to Joint Doctrine might again lead to the belief that nuclear weapons provide a basis for a viable COA. Lack of credibility demands the development of alternate COA's. Additionally, the gross environmental impacts on neighboring neutral and allied countries would have disastrous political ramifications.

NORTH KOREA

In a like comparison, an MRC on the Korean peninsula holds an

unrealistic prospect for nuclear retaliation to chemical attack.²⁹ The political ramifications of exploding a nuclear weapon over North Korea, in response to anything but an overt nuclear provocation would be tantamount to diplomatic suicide with Japan, our primary ally in the region, as well as China, a potential threat. In fact, our senior military leadership has recently stated the "U.S. never ruled out the use of tactical nuclear weapons in response to a North Korean invasion, but, many have long viewed such a response as highly unlikely."³⁰ Although there is no distinction between a conventional or an unconventional invasion, it is irrelevant. The political ramifications drive the problem. The diplomatic baggage associated with nuclear weapons present nearly universal abhorrence toward their use. Once again, the revelation undermines any small amount of credibility nuclear deterrence might have had. As with Iraq, the North Korean perspective has no supported basis for nuclear retaliation to CW. Similar arguments can be raised which make a nuclear response to CW extremely remote in any theater.

SUMMATION

In conclusion, there are numerous arguments which support development of conventional COA's in response to CW aggression. From a historical perspective, CW is documented as a hindrance to

warfighting but it is not a single point of failure to the recipient. It can be defended against and the fight will go on. Diplomatically, clearly stated response policies are proven deterrence mechanisms while public disclaimers to deterrence postures are fatal flaws to credibility. Currently, a nuclear deterrence posture has next to no credibility. Doctrinally, nuclear deterrence serves to completely undermine the concept of non-proliferation, adding an undesirable wild card to the OC's deliberate planning problem.

I believe a credible, clearly stated, conventional retaliatory policy is essential for a number of reasons. First and foremost, credibility is the cornerstone of deterrence. Without it, deterrence is a non-entity. Next, clearly stated intent goes a long way toward clarifying interpretations of pre-combative ultimatums. "Intent" does not tell the "how" of a plan. It merely defines the end state. Finally, with the conventional capabilities of the U.S., we can seriously alter the longevity of a regime if properly provoked.

To proactively pursue viable deliberate plans to counter CW, an objective, comparative evaluation of conventional and nuclear deterrence is essential. I believe the efficacy of conventional COA's, free from the diplomatic baggage of nuclear weapons, will provide the OC with a definitive deterrent.

APPENDIX A

NUCLEAR NON-PROLIFERATION TREATY

The essentials of the NPT form what is called the negative security assurance. It states in part that "the U.S. will not employ nuclear weapons against a non nuclear state, party to the NPT, or any comparable, internationally binding agreement not to acquire nuclear explosive devices, unless that state attacks the U.S. or its allies when allied to a nuclear weapons state or associated with a nuclear weapons state in carrying out or sustaining the attack."³¹ Additionally, the NPT "obligates the nuclear weapons states to negotiate in good faith toward a cessation of the nuclear arms race and toward global disarmament".³² It also "obligates nuclear-weapons states to refrain from transferring nuclear weapons or nuclear weapons technology to non nuclear weapons states and obligates non nuclear weapons states to refrain from accepting such weapons from nuclear weapons states or from manufacturing nuclear weapons themselves. The treaty does not apply in time of war."³³

CHEMICAL WEAPONS CONVENTION

The essentials of the most recent CWC, drafted in 1993 and expected to come into effect in 1996, states that "signatories pledge to destroy all Chemical Weapon (CW) agents in their possession, to forswear future production of such munitions, and to neither sell nor buy CW agents or production materials".³⁴ As opposed to previous chemical weapons conventions, when the 1993 CWC comes into effect, any use of chemical weapons by a party to that convention, whether or not in retaliation against unlawful first use by another nation, will be prohibited. It also prohibits the development, production, stockpiling and use of chemical weapons.³⁵

BIOLOGICAL WEAPONS CONVENTION

The BWC is not germane to this paper.

END NOTES

1. U.S. Congress. Senate. Committee on Foreign Relations. Chemical-Biological-Radiological Warfare and its Disarmament Aspects. Study. (Washington: U.S. Govt. Print. Off., 1960), 6.

2. Ibid.

3. Ibid.

4. Ibid. The Gas Protocol of the 1925 Geneva convention noted specifically, "gas warfare has been condemned by a consensus of the civilized world and prohibited by the treaties to which most of the parties are party," but failed to close the loophole allowing use in retaliation.

5. Nell, Peter A., 29. Our current gas protocol, the 1993 Chemical Warfare Convention (CWC), was developed from the Geneva convention of 1925 but, it closes the loophole on "response-in-kind".

6. Stringer, Hugh. Deterring Chemical Warfare: U.S. Policy Options For The 1990's. (Washington: Corporate Press 1986), 27.

7. Ibid. 30

8. Ibid.

9. Nina Tannenwald, "Nuclear Weapons in the Changing Security Environment" in Nuclear Weapons After the Cold War: Guidelines for U.S. Policy, ed. Michele A. Flournoy, (New York: HarperCollins 1993), 59.

10. Schwarzkopf, H. Norman with Peter Petre. General H. Norman Schwarzkopf, The Autobiography, It Doesn't Take A Hero. (New York: Bantam Books 1992), 453.

11. Michael Klare, Rogue States and Nuclear Outlaws: America's Search For A New Foreign Policy (New York: Hill and Wang 1995), 240.

12. Tannenwald, 63.

13. Klare, 47.

14. Ibid. 134. The basic tenets of the "Rogue Doctrine" are to contain "rogue leaders set on regional domination through military aggression while simultaneously pursuing nuclear, biological and chemical weapons capabilities".

15. Ibid. 116.

16. U.S. President. A National Security Strategy Of Engagement And Enlargement. (Washington: 1995), 15. In short, "a triad of strategic nuclear forces is sufficient to deter any future hostile foreign leadership with access to strategic nuclear forces from acting against our vital interests and to convince it that seeking a nuclear advantage would be futile".

17. U.S. Congress. House. Committee on Foreign Affairs. U.S. Nuclear Policy. Hearings (Washington: U.S. Govt. Print. Off., 1994), 8.

18. Ibid. 14.

19. U.S. Dept. Of Defense. National Military Strategy Of The United States Of America. (Washington, 1995), 15.

20. Joint Pub 3-12. Doctrine for Joint Nuclear Operations. (Washington: U.S. Govt. Print. Off., 1993), I-1.

21. Klare, 122. The Joint Strategic Targeting Board called for "retention of a sizable nuclear arsenal and the targeting of every reasonable adversary of the United States with nuclear weapons." The Board felt that a nuclear expeditionary force should be "developed to deter these states from acquiring WMD and for retaliation, should some country choose to use the WMD against the U.S. or its allies."

22. U.S. Congress. House. Committee on Armed Services. Regional Threats and Defense Options For the 1990's. Hearings. (Washington: U.S. Govt. Print. Off., 1992), 400. Jon Kyl is the ranking minority member, Department of Energy Defense Nuclear Facilities Panel. Part of his argument is "The fear being a nation could engage in any level of chemical or biological aggression and be shielded by an American non-nuclear pledge."

23. Stringer, 24.

24. Ibid. Many believe that unless we engage in continuous, intrusive, on site inspections to conclusively verify absence of chemical weapons in threat arsenals, we will never have an effective verification process. Consequently, we can never really expect to achieve 100% verification given the unlikely reception to this type of intrusiveness by our potential threats.

25. Defense Technical Information Center. Nell, Peter A. Chemical Warfare: A New National Policy For America. AD-A195 563 (Alexandria, Va: 1988), 34.

26. Klare, 30. In short, the Powell policy states we will employ "technological superiority and strategic mobility permitting rapid concentration of military power, while employing superior fire power to stun and disable the enemy forces at the very outset of battle.

27. Tannenwald, 60.

28. Ibid. 45. Prior to the outbreak of the Gulf War in January 1991, then director of the CIA W.H. Webster indicated that the U.S. decision to breach the 45 year old taboo against nuclear weapons use would have been so appalling that it should not be considered in the conflict. As a side bar, this is a policy which was not made public until after the war, but stands now as a major obstacle to creating a credible nuclear deterrence.

29. Ibid. 57. Although North Korea is a signatory to the NPT, refusal to allow inspections of their nuclear facilities thwarts efforts to determine their nuclear status. This obstacle should be viewed as an unknown from the standpoint of nuclear deterrence only.

30. Ibid. 58.

31. Committee on Foreign Affairs, 7.

32. Tannenwald, 44.

33. U.S. Navy Dept., The Commander's Handbook On The Law Of Naval Operations, NWP 1-14. (Washington: 1995), 10-2.

34. Klare, 195.

35. NWP 1-14, 10-3.

BIBLIOGRAPHY

- Center for National Security Studies. Sloss, Leon. Reexamining Nuclear Policy in a Changing World. LA11998. Los Alamos, NM: 1990.
- Defense Technical Information Center. Nell, Peter A. Chemical Warfare: A New National Policy For America. AD-A195 563 Alexandria, Va: 1988.
- Flournoy, Michele A. "Nuclear Weapons in the Changing Security Environment" in Nuclear Weapons After the Cold War: Guidelines for U.S. Policy, ed. Michele A. Flournoy, 11-35. New York: HarperCollins, 1993.
- Joint Pub 3-12. Doctrine for Joint Nuclear Operations. Washington: U.S. Govt. Print. Off., 1993.
- Klare, Michael. Rogue States and Nuclear Outlaws: America's Search For A New Foreign Policy. New York: Hill and Wang, 1995.
- Schwarzkopf, H. Norman with Peter Petre. General H. Norman Schwarzkopf, The Autobiography, It Doesn't Take A Hero. New York: Bantam Books, 1992.
- Stringer, Hugh. Deterring Chemical Warfare: U.S. Policy Options For The 1990's. Washington: Corporate Press, 1986.
- Tannenwald, Nina "Nuclear Weapons in the Changing Security Environment" in Nuclear Weapons After the Cold War: Guidelines for U.S. Policy, ed. Michele A. Flournoy, 36-72. New York: HarperCollins, 1993.
- U.S. Congress. House. Committee on Armed Services. Regional Threats and Defense Options For the 1990's. Hearings. Washington: U.S. Govt. Print. Off., 1992. 2pts.
- U.S. Congress. House. Committee on Foreign Affairs. U.S. Nuclear Policy. Hearings. Washington: U.S. Govt. Print. Off., 1994.
- U.S. Congress. Senate. Committee on Foreign Relations. Chemical-Biological-Radiological Warfare and its Disarmament Aspects. Study. Washington: U.S. Govt. Print. Off., 1960.
- U.S. Dept. Of Defense. National Military Strategy Of The United States Of America. Washington, 1995.
- U.S. Navy Dept. The Commander's Handbook On The Law Of Naval Operations. NWP 1-14. Washington: 1995
- U.S. President. A National Security Strategy Of Engagement And Enlargement. Washington: 1995